

Analysis Of Learning Effectiveness Between College Students With Different Genders Of The Department Of Geography, University Of Maiduguri, Borno State, Nigeria.

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Abstract: Gender bias in science classrooms has been and still continues to be a problem. This study was aimed to determine the influence of gender on academic performance of final year students in geography department, University of Maiduguri. A CGPA (Cumulative grade point average) of one hundred and eighty two (182) was collected, this include 156(85.7%) male and 26(14.7%) female. The findings of this study shows that there is significance influence between genders and academic performance of students in the department with highly statistical difference ($t = 2.6662$, $df = 7$, $p = 0.0578$, Confidence interval = 1.751879 20.44812 and sample estimated mean = 11.1). Therefore, parents, teachers, and counselors give higher level of expectations for female and encourage them, so that they will perform better in University level.

Key Word: Academic performance, Gender, Students and CGPA

I. Introduction

Gender is a range of physical, biological, mental and behavioural characteristics pertaining to, and differentiating between femininity and masculinity, that is state of being male or female or intersex, and sex based social structures. Gender bias in science classrooms has been and still continues to be a problem (AAUW, 1999). Significant researches have indicated that gender plays a part in the student academic achievement. For example, researchers have found significant differences between male and female students in science achievement. Gender is one of the personal variables that have been related to differences found in motivational functioning and in self-regulated learning. Different research has demonstrated the existence of different attribution patterns in boys and girls, such that while girls tend to give more emphasis to effort when explaining their performance (Lightbody et al., 1996; Georgiou, 1999), boys appeal more to ability and luck as causes of their academic achievement (Burgner & Hewstone, 1993). Several studies have documented that female students have lower self-efficacy in Science compared to male students. Girls' capabilities are undermined by sex-role stereotypes in many cultures intimating that females are not as able as males, especially in such disciplines as science. Despite improvements in the past two decades, girls are still less likely than boys to take science courses in Universities (AAUW, 1999). Because of this reason, fewer female students may study Science based at University level. Another contributing factor could be the lower level of expectations that parents, teachers, and counselors often hold for girls, which can discourage further study in scientific and technical fields. Although girls' science enrollments increased during the nineties and even exceeded boys in Biology and Chemistry, boys are still enrolled more often in physics and higher-level science courses than girls. Confidence is strongly correlated to students continuing in science courses. In addition, males display more positive attitudes towards careers in science than females. Conversely, females were more likely than males to have attempted diagnosing problems with an unhealthy plant or animal. However, certain studies indicated that gender differences generally are small or non-existent. Hedges and Newell (1995) found that in science, boys outperform girls, but in reading and writing girls have the advantage. Therefore, the objective of this study is to determine the influence of gender on academic performance of final year geography students at University of Maiduguri, Borno state, Nigeria.

II. Statement Of The Research Problem

What explains the gendered nature of the academic performance? The research may attempt to offer a potential theoretical explanation for the findings of the study under the reviews of some scholars as well as self-observations conducted.

In the last two decades of the 20th century, the use of gender in academic increased greatly, outnumbering uses of sex in social sciences. While the spread of the word in science publications can be attributed to the influence of feminist, its use of euphemism for sex is attributed to failure to grasp the distinction made in feminist theory, and distinction has sometimes become blurred with the theory itself.

Among the reasons that working scientists have given me for choosing gender, rather than sex in biological contexts are the desires to signal sympathy with the feminist goals, to use a more academic term, or to avoid the connotation of the computation.

Aim of the study

The aim of the study is to determine the influence of gender on academic performance of geography students in the University of Maiduguri.

Objectives of the study

The objects of this research work are as follows:-

- i. To compare the performance of male and female students in geography department.
- ii. To determine the relationship between gender and academic performance.

Significance of the study

The study is important because there are many unanswered questions about ways of improving performance in geographic knowledge. It is quite clear that the federal and state governments are interested in developing geographic knowledge in the country. There have been huge cries over the performance of students in geographic knowledge.

The study intended to highlight the position of things among others and help lecturers to be aware of the problems encountered in the gender related difference and the performance in geography and also help them to find solutions to the problems. The result of the study is hoped to aid the educational planners, authors and curriculum experts in properly organizing geographic oriented programmes. The data use will also be important to other researchers wishing to make a comparative study of gender-related influence in attitude and performance of students in schools at different levels.

Definition of terms

- i. **Gender:** refers to male or female characteristic of the population, example boy or girl, man or woman.
- ii. **Geography:** Is a science that studies the spatial interaction of different phenomenon over the earth's surface. It focuses on man and environment (earth) as well as the description of their inter-relationships.

III. Literature Review

The study of Gender related influences and performance of geography students towards the discipline as a subject in the University has been a great concern, such that many authors have written a lot. The authors reviewed what other scholars have written about the influence and performance of male and female in the field of geographical sciences.

Famajoro (1988) conducted a study examining the differences and similarities in Gender role norms of Nigerian students and American students. From his study, he concluded that female have high significant feminist scores on the femininity scale of Ben Gender-role inventory than the male counterparts, while male from both group have significantly higher masculinity than the female. He concluded that, the existence of androgyny among American female can be traced in existing Gender of rigid value and ideas concerning women in Nigerian culture.

However, there is wide concern about the number of female studying geography pursuing career in geography as a field. For instance, a great number of male in Nigeria perceive their role to be those of medicine, law, engineering and geography. This shows that girls have more negative influence towards geography than boys. It is clearly shown in the department of Geography University of Maiduguri Male enrolment in geography is more than female.

Shaughness (1982) said exogenous variables are those outside the student's immediate influence on the learning process which are, age of students, family background and the cultural factors. While exogenous variables are those within the system that are under the control of the learning process and its agent especially

teachers, parents, school administrators, professional involvement, methods of perspective personality trait and performance towards learning and influence between rural and urban areas in-terms of social amenities.

When gender first began to be investigated by geographers in studying geography, the focus was largely on performance of female at every level of the educational system and the way in which traditional system and the way in which traditional ideas about the proper role of women in society prevent them achieving their full potential. However female have markedly improved their educational performance during the 1980s and 1990s.

According to Gwige(1990) student performance continue to be one of the most controversial issue in educational sector. The study furthered that some of the factors which affect students' performance in school include individual difference, family background, socioeconomic factors, environment and quality of teachers.

The book delusion of gender; however our minds, society and Neurosxium create differences published in 2010 by Cordelia fine provides a critical analysis of hundreds of recent studies on sex and society. She argues that there are societal beliefs attribute to commonly perceived sex differences. Fine argued that studies of psychological gender difference are controversial and subject to error. Many small scale studies reported differences that are not repeated in larger studies – self report questionnaires are subject to bias particular if the subjects are told. It is also possible that commentators may exaggerate or downplay differences for ideological reasons.

Ediriweera (2010) carried out a study on the factors influencing student academic performance in the department of human resource management at the University of Kelaniya ,Sri –Lanka .It was based on a five year data of academic performance. Three and eighty two students were selected as with individual as unit of analysis. Students' performance subjected to independent sample T test. The result indicated significant difference exists between the academic performance of male and female students. It was attributed to environmental factors. An exploratory data revealed that under unit analysis female students tend to perform better at university examination than their male counterpart.

Gender was investigated as a mainstream issue relatively late in the sociological discursions focused mainly upon class differences in attainment, however with the impact of feminist research during the 1980s the educational experience of female students increasingly came to the fore.

IV. Material And Methods

Study Area

The study was carried out in the Department of Geography, University of Maiduguri, Borno state, Nigeria. Department of Geography is one of the departments in the faculty of social sciences; it normally runs programme for the undergraduate and postgraduate studies. The department admitted her new students from all over the 36 State of the Federation including foreigners based on the University policy of admission. The department usually offers admission to student in the course, so that at the end of the programmes they will be awarded with B. Sc (Hons)Geography, M.Sc and Ph.D.

Data Collection

A CGPA (Cumulative grade point average) of one hundred and eighty two (182) final year students from the department of Geography, university of Maiduguri, Borno state for 2012/2013 academic session were collected. These include 156(85.7%) male and 26(14.7%) female. The GPA is the performance of students at each semester which obtained by multiplying the grade point attained in each course by the number of credit assigned to that course, summing these up and dividing by the total number of credit unit in the semester. The CGPA of each student are pooled together in final year, so that each student having one CGPA that determine the class of his/her degree. The highest possible CGPA in the department was 5.000, while the lowest possible scaled score was 0.10. CGPA is categorised as first class (4.50- 5.00), second class upper (3.50- 4.49), second class lower (2.40- 3.49), third class (1.50- 2.39) and pass (0.10- 1.49). The CGPA was used in this study to compare the performance of male and female in the department.

Statistical analysis

Data for this research study was obtained from the department of Geography, university of Maiduguri, Borno state. One sample independent t- test was the statistical tool used to compute the statistical difference between gender and academic performance of the student with a hypothesis stated that;

Null hypothesis H₀: There is no significant difference between performance of male and female students in the department.

Alternative hypothesis H_i: There is significant difference between performance of the male and female students in the department. The data was analysed using statistical package (R version 2.13.1),

V. Results

The result of the performance of students in geography department, University of Maiduguri, between male and female are shown in Table 1. The result revealed that there is highly statistical significance influence of gender on academic performance of the students in the department ($t = 2.2662$, $df = 7$, p -value = 0.0578, true mean is not equal to 0. 95 percent confidence interval: -0.9879052, 46.4879052 1sample estimates: mean of x 22.75). Most students got CGPA between 2.5- 3.49 (second class lower) followed by 3.5- 4.49 (second class upper) and 1.5- 2.39 (third class), only 33 (18.1%) students obtained CGPA between 4.5- 5.0 (first class) as shown in Table 1. It is evident from Table 1 that the performances of male outweigh the female students, because forty five (45) of the second class upper out of fifty three (53) were obtained by the male in the department, while 81 (71.4%) male students got second class lower out of the total 96 meant for the division and 30 (54.5%) obtained third class lower. Conversely, only 8(28.6%) obtained second class upper, while the remaining female students obtained second class lower and third class as shown in Table 1.

Table 1: Influence of gender on academic performance of final year geography students at University of Maiduguri, Borno state, Nigeria.

CGPA	Total (%)	Male (%)	Female (%)
4.5- 5.0	0(0)	0(0)	0(0)
3.5- 4.49	53(29.1)	45(84.9)	8.0(15.1)
2.4- 3.49	96(52.7)	81(84.2)	15(15.6)
1.5- 2.39	33(18.1)	30(91.0)	3.0(9.10)
0.1- 1.49	0(0.00)	0(0.00)	0(0.00)
Total	182	156(85.7)	26(14.3)

($t = 2.2662$, $df = 7$, $p = 0.0578$, Confidence interval = -0.9879052 46.4879052 and sample estimated mean = 22.75)

VI. Discussion

The data presented in this study were collected from department of geography, University of Maiduguri, Borno state, Nigeria. The findings show that there is significance influence between genders and academic performance of students in the department with highly statistical difference ($t = 2.2662$, $df = 7$, $p = 0.0578$, Confidence interval = -0.9879052 46.4879052 and sample estimated mean = 22.75). The result of this study corroborates the findings of Borde (1998), which found no evidence of academic performance being influenced by gender. Based on an analysis of closeto two million graduating students, it also not correlated with the work of Woodfield and Earl-Novell (2006) which found female students outperformed male students and attributed this partly to female students being more conscientious and thus less likely to miss lectures. However, research has shown that men perform better than women in certain academic discipline while women outperform men in other academic discipline (Haistet al., 2000). Also the result of this study disagree with the study of Weerakkody and Ediriweera (2008) which show that female students tend to perform better at the university examinations than their male counterparts, irrespective of the course studied; female students have higher academic performance than the male students. Hyde and Kling (2000) stated that in higher education such as University women are often found to outperform men irrespective of the measure of success used. Betts and Morell (1999) reported that sex remains a significant predictor of CGPA after controlling for various individual. Similarly, investigating about 60,000 students from 22 public research universities, Kim et al. (2003) find that gender has a significant impact on student graduation. Conversely, the result of this study similar to the report of Hardesty (1992) which noticed that there were lower female science achievement scores and fewer females in science achievement scores and in related careers in his study. According to Fensham (1980) physical science is perceived as being tough, hard and analytical. This leads to the development of the image that science is more masculine. He adds that this is reflected in teachers and students way of participation. The result of this study also agrees with the work of Kull (1982) who designed and carried out a study to determine the impact of student attitudes towards sciences. The sample size constituted of 450 eighth grade students in New York Junior High School. These students were presented and post tested in their scientific attitude for the results. Positive attitude for most of the students were observed. Further it was noted that there was greater interest in science for boys than girls. Also, Akinmade (1982) focused on perception and attitude of high school students towards science courses in sub-urban school of Michigan. From the findings of the study boys were significantly more interested in manipulation of laboratory equipment and materials than the girls. The result of this study correlated with the work of Aghenta (1989) which showed that difficulties of science occupations was a significant factor in preventing girls from entering scientific fields. Lee and Lockheed (1990) conducted a study on perceived ability and gender difference in achievement in sciences. A total of 1012 students enrolled in a single-sex and mixed-sex secondary schools from ten Southern States in Nigeria. From the studies they found that perceived ability positively related to higher achievement in a subject and this was more in male students compared to the female students.

VII. Conclusion

The result of this study pinpointed that there is significant influence between gender and academic performance of students in geography department. Male students had higher CGPA scores in geography than their female counterparts. This conclusion is based on the finding that the mean difference with statistical significance ($t = 2.2662$, $df = 7$, $p = 0.0578$, Confidence interval = -0.9879052 46.4879052 and sample estimated mean = 22.75) was found between the two groups. Therefore, parents, teachers, and counselors are advice to give higher level of expectations for female and encourage them, so that they will perform better at University level.

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